

Redescription of *Stylopauropus (D.) schusteri* Remy, 1959 (Myriapoda, Pauropoda, Pauropodidae)

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Abstract. — *Stylopauropus (Donzelotauropus) schusteri* Remy, 1959, is redescribed from the original type material.

Résumé. — *Stylopauropus (Donzelotauropus) schusteri* Remy, 1959, est redécrit du matériel-type original.

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Within the subgenus *Donzelotauropus* in *Stylopauropus* (Pauropodidae) the species, now eleven in number, are most often easy to recognize but the two North American *S. (D.) schusteri* and *S. (D.) quadrisulcus* both described by REMY (1957, 1959) might be confused. Suspecting that the description of the former could need to be emended, the type material was studied. It was sent to me through the kind offices of Dr. J.-M. DEMANGE, Muséum national d'Histoire naturelle, Paris, and it consists of two adult specimens (♂, ♀) collected by Dr. B. CONDÉ, Nancy, in 1958, from Arkansas, Newton Co., about 1 km SE Jasper together with eight other pauropod species (REMY, 1959).

The check-up of the original description with the type material revealed that the consistency was incomplete. The compatibility of the male was good but the female could be fit in only partly. In preparing the description REMY had, apparently, concentrated on the male but sometimes also inserted characters from the female. The main part of the latter, however, had not been considered.

A close study of the female showed that it deviated from the male in so many respects that the two specimens could not be conspecific. Accordingly, REMY's description was a mixture of characters from two species which have to be kept separated. One of them, REMY's original species is redescribed below. As holotype is here designated the male because : (1) the main part of the original description refers to it, (2) it was also figured by REMY (1959 : 184, fig. 1) and (3) it is in the best condition for a restudy. The redescription has been widened to include also some characters not described earlier and all characters referring to the female have been excluded.

The erection of a new species for the female (mounted on the same slide as the male) must be postponed because the body has been strongly flattened between the glasses and also distorted and because no other specimens are available.

Stylopaupopus (D.) schusteri Remy, 1959

REDESCRIPTION

TYPE LOCALITY : The U.S.A., Arkansas, Newton Co., about 1 km SE Jasper.

HOLOTYPE (unique) : ad. (♂), leg. B. CONDÉ, 1958.VI.15. Mounted on slide. In the collections of the Muséum national d'Histoire naturelle, Laboratoire de Zoologie (Arthropodes), Paris.

Length : 1.07 mm.

Head (fig. 1 *a*) : Most tergal setae clavate, blunt, with short dense pubescence ; a_3 of 2nd row cylindrical, densely annulate. Relative lengths of setae, first row : (a_1 lacking), $a_2 = 10$; 2nd row : $a_1 = 8$, $a_2 = a_3 = 12$; 3rd row : $a_1 = 7$, $a_2 = 6$; 4th row : $a_1 = 7$, $a_2 = 16$ (a_3 and a_4 lacking). In 2nd, 3rd and 4th rows the ratio $a_1/a_1 - a_1$ is 0.6, 0.6 and 1.0 respectively. Length of temporal organs about as long as their shortest distance apart ; probably no pistil. Cuticle of head glabrous.

Antennae (fig. 1 *b*) : Segment 4 with at least 5 cylindrical blunt setae with short dense pubescence, relative lengths of them : $p = 100$, $p' = 80$, $p'' = 36$, $r = 25$, $u = 8$. Tergal seta p 1.2 times as long as tergal branch t . The latter 4 times longer than wide, 1.1 times as long as sternal branch s . The latter about 2.2 times as long as wide, posterodistal corner distinctly truncate ; its seta q inserted near the middle, it is similar to p , 1.2 times as long as s . Relative lengths of flagella (base segments included) and base segments : $F_1 = 100$, $bs = 8$; $F_2 = 84$, $bs = 8$; $F_3 = 50$, $bs = 6$. The F_1 2.7 times as long as t , F_2 and F_3 2.6 and 1.5 times as long as s respectively. Distal calyces of F_2 and F_3 subhemispherical, those of F_1 probably higher. Globulus g long with thick stalk, 2.4 times as long as its greatest diameter, 0.7 of length of s , its greatest diameter 1.1 times as long as diameter of t ; 9 or 10 bracts. Globulus of 3rd segment small. Antenna glabrous.

Trunk : Setae of collum segment (fig. 1 *c*) 2.6 times as long as broad, leafshaped, with short dense pubescence ; secondary branch small, cylindrical, glabrous ; anterolateral setae 1.5 times as long as submedian ones. Sternite process broad and with an anterior incision. Setae on tergites increasing in length posteriorly, densely pubescent ; on tergite I they are clavate, on II and III slightly clavate, on IV and V subcylindrical with a small endswelling, on VI subcylindrical, slightly tapering. There are 4 + ? 4 setae on tergite I, 6 + 6 on II-V and 4 + 2 on VI. Submedian posterior setae of tergite VI (fig. 1 *d*) 1.6 times as long as their distance apart and 1.7 times as long as pygidial setae a_1 . Relative lengths of trichobothria (fig. 1 *d, e*) : $T_1 = 100$, $T_2 = 114$, $T_3 = 130$, $T_4 = 172$, $T_5 = 222$ and 227. All have simple axes and simple straight pubescence hairs. The T_1 and T_2 have oblique hairs on proximal 1/4, erect on distal half ; on T_3 the hairs are shorter and oblique, only a few hairs most distally are erect ; T_4 as T_3 but their axes are a little thinner ; T_5 as T_3 too but its pubescence is more depressed.

Penes (fig. 1 *f*) about 1.9 times as long as wide ; distal seta about 0.7 of length of organ.

Legs : Setae on coxa and trochanter of 9th pair of legs (fig. 1 *g*) furcate, blunt, very shortly pubescent ; primary branch leafshaped, 3.1-3.8 times as long as broad ; secondary branch much smaller, 0.6 of length of primary branch.

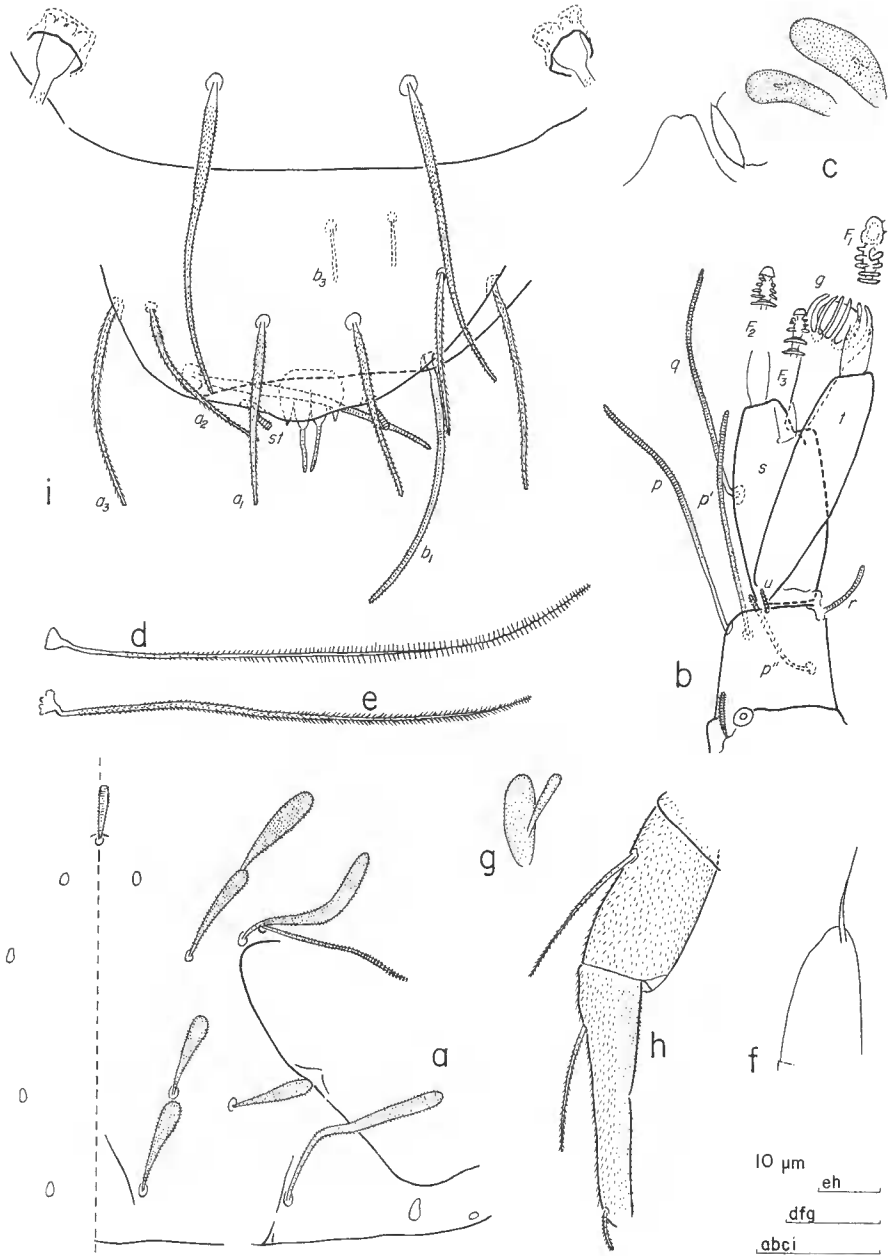


FIG. 1. — *Stylopaupopus (Donzelotaupopus) schusteri* Remy, holotype ♂ : a, head, right side, tergal view ; b, left antenna, tergal view ; c, collum segment, median and left part, sternal view ; d, T₁ ; e, T₃ ; f, penis ; g, seta of trochanter of 9th pair of legs ; h, tarsus and tibia of 9th pair of legs ; i, pygidium and posterior part of tergite VI, tergal view.

Tarsus of 9th pair of legs (fig. 1 *h*) tapering with almost straight sternal side, 4.4 times as long as its greatest diameter. Proximal seta 0.5 of length of tarsus and 3.1 times as long as distal seta ; the former tapering, pointed, densely pubescent with straight, simple, depressed hairs ; the latter cylindrical, blunt, with oblique pubescence.

Pygidium (fig. 1 *i*), tergum : Posterior margin between *st* with a rounded bulge ; cuticle glabrous. Relative lengths of setae : $a_1 = 100$, $a_2 = 90$, $a_3 = 117$, $st = 20$. The a_1 , a_2 and a_3 subcylindrical, tapering, with dense pubescence of depressed, simple, straight hairs ; a_1 almost straight, a_2 and a_3 curved inwards ; *st* converging, slightly clavate, densely annulate. Distance $a_1 - a_1$ 0.5 of length of a_1 , distance $a_1 - a_2$ twice longer than distance $a_2 - a_3$; distance $st - st$ 3.3 times as long as *st* and 1.3 times as long as distance $a_1 - a_1$.

Sternum : Posterior margin between b_1 almost straight ; cuticle glabrous. Relative lengths of setae ($a_1 = 100$) : $b_1 = 140$ and 150, $b_3 = 27$ and 32. No b_2 . The b_1 subcylindrical, a little tapering, b_3 very slightly increasing in width outwards ; both setae with very short, dense, oblique pubescence. Anal plate somewhat trapeziform, broadest at about the middle, laterally rounded ; posterior margin protruding into four subtriangular appendages all directed backwards. Submedian appendages separated by a shallow V-shaped incision and with cylindrical, posterior, a little converging appendages which are about as long as plate.

TAXONOMICAL REMARKS : REMY stated (1959 : 85) that *S. (D.) schusteri* had to be placed near his own *S. (D.) quadrisulcus* now known from Tennessee, North Carolina (REMY, 1957 : 82, 1958 : 1-2) and West Virginia (SCHELLER, 1985 : 247). They were similar in most respects, differing only in (1) the length of the posterior setae on the tergite VI compared with the length of the pygidial setae a_1 (the ratio was 1.0 in *schusteri*, 1.75 — 2.25 in *quadrisulcus*) and in (2) the shape of the styli (short clavate in *schusteri*, long thin cylindrical in *quadrisulcus*). Probably the former difference is unusable because the ratio in the *schusteri* male is actually 1.7. However, the second character seems to work and there are a few more, in the foremost place the length/distance ratio of the styli (0.3 in *schusteri*, 0.6 in *quadrisulcus*) but also the length/width ratio of the sternal antennal branch (2.2 in *schusteri*, 3.0 in *quadrisulcus*). The seta on the sternal antennal branch seems also to be proportionately longer in *schusteri* than in *quadrisulcus*. However, in general the two species are morphologically very alike and they may be very near related.

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